

EMERGING OCCUPATIONS

Emerging occupations can be described as new occupations created by changes in technology, society, markets, or regulations. Emerging occupations may also be existing occupations that have been substantially modified by the same changes, and are increasing in employment.

In the conduct of the Occupational Employment Statistic (OES) survey, employers were asked to report employees that did not fit in an existing OES occupation in “all other” job categories. Employers were asked to provide a job title and description for the “all other” occupations that they believed to be numerically important or emerging due to technological change. Staff then reviewed the 1999 and 2000 OES supplemental sheets, the job titles and descriptions and identified those, which may be considered emerging occupations.

The following pages provide the occupations most frequently cited on the 1999-2000 OES supplemental sheets. For each occupation, the report contains the following information:

1. Occupational title
2. Occupational description: A narrative of the duties, tasks and responsibilities for each occupation. The information came from employer job description.
3. Knowledge, Skills, and Abilities: The knowledge, skills, and abilities of related occupations are provided for each occupation. Information is from O*NET.
4. Education and Training Requirements: Requirements came from O*NET.
5. General Work Activities: Information came from O*NET.
6. Most Prevalent Industries: Industry information came from employers who indicated they have these occupations.
7. Associated Titles: Lists O*NET codes for occupations which are similar to the emerging occupation.

ACCOUNT EXECUTIVE		
Account executives are usually found in the advertising business services but are being reported by establishments in other industries. They manage client accounts and contact clients on a regular basis to intro-duce new services and products to meet the company's objectives.		
Knowledge	Skills	Abilities
Sales & Marketing	Persuasion	Oral Expression
English Language	Speaking	Oral Comprehension
Mathematics	Active Listening	Written Comprehension
	Information Gathering	Written Expression
		Deductive Reasoning
		Speech Clarity
		Speech Recognition
Education & Training Requirements: Most account executives require a high school diploma, vocational training, related on-the-job experience, or an associate's degree. Some may require a bachelor's degree.		
General Work Activities: Selling or Influencing Others; Communicating with Persons Outside Organization; Getting Information Needed to Do the Job; Establishing & Maintaining Relationships; Provide Consultation & Advice		
Most Prevalent Industries: Construction, Communications, Utilities, Engineering, Sales, Financial Services		
Associated Titles: O*Net: 11-2011.00 Advertising & Promotion Managers; 41-3011.00 Advertising Sales Agents; 41-3021.00 Insurance Sales Agents; 41-3031.01 Sales Agents, Securities and Commodities; 41-3031.02 Sales Agents, Financial Services; 41-4012.00 Sales Representatives, Wholesale and Manufacturing		

GRANT WRITER

Grant writers, development directors, and fundraising specialists work at generating revenue from donors for non-profit organizations. They maintain contact with a variety of donors (individuals, corporations, foundations, or government agencies) and coordinate fundraising campaigns and activities. They are involved in writing grant proposals and related documents.

Knowledge	Skills	Abilities
Sales & Marketing	Writing	Written Expression
Communications & Media	Reading Comprehension	Written Comprehension
English Language	Idea Generation	Oral Comprehension
Computers & Electronics	Information Gathering	Oral Expression
	Monitoring	Fluency of Ideas
	Persuasion	Originality
	Critical Thinking	Near Vision
	Coordination	Information Ordering
	Idea Evaluation	Deductive Reasoning
	Product Inspection	Inductive Reasoning

Education & Training Requirements: Most grant writers require a four-year bachelor's degree, but some do not.

General Work Activities: Getting Information Needed to Do the Job; Judging Qualities of Things, Service, People; Communicating with Persons Outside Organization; Evaluating Information Against Standards; Communicating with Other Workers; Thinking Creatively; Identifying Objects, Actions, and Events; Making Decisions & Solving Problems; Organizing, Planning, & Prioritizing; Provide Consultation & Advice

Most Prevalent Industries: Education, Health, Social Services

Associated Titles: O*Net: 27-3043.02 Creative Writers, 27-3043.04 Copy Writers, 27-3031.00 Public Relations Specialists

GRAPHIC DESIGNER

Continued advances in computer hardware, software, printers, and related equipment now allow firms to do more of their artistic production in-house. Graphic designers use a variety of print, film, and electronic media to design and produce artworks to meet specific commercial or promotional needs, such as packaging, displays, and logos. Technological changes in computers and software applications have enabled designer to manipulate and combine images and text, test different formats, prepare work for printing, and disseminate information on-line. Graphic designers produce artwork for t-shirts, coupon books, newspapers, signs, banners, etc.

Knowledge	Skills	Abilities
Fine Arts	Information Organization	Originality
Communications & Media	Operation & Control	Fluency of Ideas
Design	Idea Generation	Visualization
Computers & Electronics	Reading Comprehension	Visual Color Discrimination
	Idea Evaluation	Oral Expression
	Equipment Selection	Oral Comprehension
	Product Inspection	Written Expression
	Writing	Deductive Reasoning
	Synthesis/Reorganization	Written Comprehension
	Active Listening	Near Vision

Education & Training Requirements: Most graphic designers require a four-year bachelor's degree, but some do not.

General Work Activities: Thinking Creatively; Drafting & Specifying Technical Devices, etc.; Getting Information Needed to Do the Job; Interacting with Computers; Identifying Objects, Actions, and Events; Communicating with Persons Outside Organization; Handling and Moving Objects; Implementing Ideas, Programs, etc.; Judging Qualities of Things, Service, People; Estimating Needed Characteristics

Most Prevalent Industries: Printing and Publishing, Wholesale and Retail Trade, Membership Organizations, Health, Education, Social Services

Associated Titles: O*Net: 27-1024.00 Graphic Designers

QUALITY ASSURANCE (QA) SPECIALIST

Directors, Managers, Specialists, Inspectors, and Coordinators work to ensure the quality of products or services. QA personnel administer quality assurance programs and formulate plans for quality improvement. They inspect and test raw materials, input components, and finished products. Some conduct client satisfaction surveys and handle consumer complaints.

Knowledge	Skills	Abilities
Production & Processing	Product Inspection	Problem Sensitivity
Mathematics	Information Gathering	Written Comprehension
	Problem Identification	Near Vision
		Written Expression
		Information Ordering
		Inductive Reasoning

Education & Training Requirements: Usually quality assurance specialists require a high school diploma and vocational training or related on-the-job experience. Some may require an associate's or bachelor's degree.

General Work Activities: Getting Information Needed to Do the Job; Identifying Objects, Actions, and Events; Monitor Processes, Material, Surroundings; Communicating with Other Workers; Provide Consultation & Advice; Analyzing Data or Information

Most Prevalent Industries: Transportation, Health, Engineering, Business Services

Associated Titles: O*Net: 51-9061.01 Materials Inspectors; 51-9061.05 Production Inspectors, Testers, Sorters, Graders, Sorters, Samplers, Weighers; 11-3051.00 Industrial Production Managers; 17-2112.00 Industrial Engineers

VOLUNTEER COORDINATOR

Volunteer coordinators are hired primarily by non-profit organizations to recruit, train, schedule, and organize volunteer programs.

Knowledge	Skills	Abilities
Personnel & Human Resources	Speaking	Oral Comprehension
Education & Training	Reading Comprehension	Oral Expression
Administration & Management	Management of Personnel Resources	Speech Clarity
English Language	Active Listening	Written Comprehension
	Coordination	Written Expression
	Information Gathering	Near Vision
	Writing	Fluency of Ideas

Education & Training Requirements: Most require a high school diploma, training in vocational schools, related on-the-job experience, or an associate's degree. Some may require a bachelor's degree.

General Work Activities: Staffing Organizational Units; Communicating with Persons Outside Organization; Judging Qualities of Things, Service, People; Communicating with Other Workers; Getting Information Needed to Do the Job; Analyzing Data or Information

Most Prevalent Industries: Social Services, Membership Organizations, Health, Government

Associated Titles: O*Net: 11-3042.00 Training & Development Managers; 11-9111.00 Medical & Health Service Managers; 11-9151.00 Social & Community Managers; 13-1071.01 Employment Interviewers, Private or Public Employment Service; 13-1071.02 Personnel Recruiters; 13-1073.00 Training & Development Specialists

APPENDIX

O*NET Knowledge, Skills, Abilities, and General Work Activities

Knowledge – a set of facts and principles needed to address problems and issues in particular parts of a job.

Administration & Management	Knowledge of principles and processes involved in business and organizational planning, coordination, and execution. This includes strategic planning, resource allocation, manpower, modeling, leadership techniques, and production methods.
Communications & Media	Knowledge of production, communication, and dissemination techniques and methods including alternative ways to inform and entertain via written, oral, and visual media.
Computers & Electronics	Knowledge of electric circuit boards, processors, chips, and computer hardware and software, including applications and programming.
Design	Knowledge of design techniques, principles, tools and instruments involved in the production and use of technical plans, blueprints, drawings, and models.
Education & Training	Knowledge of instructional methods and training techniques including curriculum design principles, learning theory, group and individual teaching techniques, design of individual development plans, and test design principles.
English Language	Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.
Fine Arts	Knowledge of theory and techniques required to produce, compose, and perform works of music, dance, visual arts, drama, and sculpture.
Mathematics	Knowledge of numbers, their operations, and interrelationships including arithmetic, algebra, geometry, calculus, statistics, and their applications.
Personnel & Human Resources	Knowledge of policies and practices in personnel/human resource functions. This includes recruitment, selection, training, and promotion regulations and procedures; compensation and benefits packages; labor relations and negotiation strategies; and personnel information systems.
Production & Processing	Knowledge of inputs, outputs, raw materials, waste, quality control, costs, and techniques for maximizing the manufacture and distribution of goods.
Sales & Marketing	Knowledge of principles and methods involved in showing, promotion, and selling products or services. This includes marketing strategies and tactics, product demonstration and sales techniques, and sales control systems.

Skills – some are developed over time and are used not only to do work but also to learn other skills; others are important for performance on many jobs.

Active Listening	Listening to what other people are saying and asking questions as appropriate.
Coordination	Adjusting actions in relation to others' actions.
Critical Thinking	Using logic and analysis to identify the strengths and weaknesses of different approaches.
Equipment Selection	Determining the kind of tools and equipment needed to do a job.
Idea Evaluation	Evaluating the likely success of an idea in relation to the demands of the situation.
Idea Generation	Generating a number of different approaches to problems.
Information Gathering	Knowing how to find information and identifying essential information.
Information Organization	Finding ways to structure or classify multiple pieces of information.
Management of Personnel Resources	Motivating, developing, and directing people as they work, identifying the best people for the job.
Monitoring	Assessing how well one is doing when learning or doing something new.
Operation & Control	Controlling operations of equipment or systems.
Persuasion	Persuading others to approach things differently.
Problem Identification	Identifying the nature of problems.
Product Inspection	Inspecting and evaluating the quality of products.
Reading Comprehension	Understanding written sentences and paragraphs in work related documents.
Speaking	Talking to others to effectively convey information.
Synthesis/Reorganization	Reorganizing information to get a better approach to problems or tasks.
Writing	Communicating effectively with others in writing as indicated by the needs of the audience.

Abilities – an attribute that influences performance on a variety of tasks

Deductive Reasoning	The ability to apply general rules to specific problems to come up with logical answers. It involves deciding if an answer makes sense.
Fluency of Ideas	The ability to come up with a number of ideas about a given topic. It concerns the number of ideas produced and not the quality.
Inductive Reasoning	The ability to combine separate pieces of information, or specific answers to problems, to form general rules or conclusions. It includes coming up with a logical explanation for why a series of seemingly unrelated events occur together.
Information Ordering	The ability to correctly follow a given rule or set of rules in order to arrange things or actions in a certain order. The things or actions can include numbers, letters, words, pictures, procedures, sentences, and mathematical or logical operations.
Near Vision	The ability to see details of objects at a close range (within a few feet of the observer).
Oral Comprehension	The ability to listen to and understand information and ideas presented through spoken words and sentences.
Oral Expression	The ability to communicate information and ideas in speaking so others will understand.
Originality	The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.
Problem Sensitivity	The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
Speech Clarity	The ability to speak clearly so that it is understandable to a listener.
Speech Recognition	The ability to identify and understand the speech of another person.
Visual Color Discrimination	The ability to match or detect differences between colors, including shades of color and brightness.
Visualization	The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.
Written Comprehension	The ability to read and understand information and ideas presented in writing.
Written Expression	The ability to communicate information and ideas in writing so others will understand.

General Work Activities – general types of job behaviors

Analyzing Data or Information	Identifying underlying principles, reasons, or facts by breaking down information or data into separate parts.
Communicating with Other Workers	Providing information to supervisors, fellow workers, and subordinates. This information can be exchanged face-to-face, in writing, or via telephone/electronic transfer.
Communicating with Persons Outside the Organization	Communicating with persons outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged face-to-face, in writing, or via telephone/electronic transfer.
Drafting & Specifying Technical Devices, etc.	Providing documentation, detailed instructions, drawings, or specifications to inform others about how devices, parts, equipment, or structures are to be fabricated, constructed, assembled, modified, maintained, or used.
Establishing & Maintaining Relationships	Developing constructive and cooperative working relationships with others.
Estimating Needed Characteristics	Estimating the Characteristics of Materials, Products, Events, or Information: Estimating sizes, distances, and quantities, or determining time, costs, resources, or materials needed to perform a work activity.
Evaluating Information Against Standards	Evaluating information against a set of standards and verifying that it is correct.
Getting Information Needed to Do the Job	Observing, receiving, and otherwise obtaining information from all relevant sources.
Handling & Moving Objects	Using one's own hands and arms in handling, installing, forming, positioning, and moving materials, or in manipulating things, including the use of keyboards.
Identifying Objects, Actions, and Events	Identifying information received by making estimates or categorizations, recognizing differences or similarities, or sensing changes in circumstances or events.
Implementing Ideas, Programs, etc.	Conducting or carrying out work procedures and activities in accord with one's own ideas or information provided through directions/instructions for purposes of installing, modifying, preparing, delivering, constructing, integrating, finishing, or completing programs, systems, structures, or products.
Interacting with Computers	Controlling computer functions by using programs, setting up functions, writing software, or otherwise communicating with computer systems.
Judging Qualities of Things, Service, People	Making judgements about or assessing the value, importance, or quality of things or people.

General Work Activities (continued)

Making Decisions & Solving Problems	Combining, evaluating, and reasoning with information and data to make decisions and solve problems. These processes involve making decisions about the relative importance of information and choosing the best solution.
Monitor Processes, Material, Surroundings	Monitoring and reviewing information from materials, events, or the environment, often to detect problems or to find out when things are finished.
Organizing, Planning, & Prioritizing	Developing plans to accomplish work, and prioritizing and organizing one's own work.
Provide Consultation & Advice	Providing consultation and expert advice to management or other groups on technical, systems-related, or process related topics.
Selling or Influencing Others	Convincing others to buy merchandise/goods, or otherwise changing their minds or actions.
Staffing Organizational Units	Recruiting, interviewing, selecting, hiring, and promoting persons for the organization.
Thinking Creatively	Originating, inventing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.